

REMARKS

The last Office Action has been carefully considered.

It is noted that Claims 1, 3, 5, 10, 11, 13-17, 19, 24, 25, and 31 are rejected under 35 USC 103 over the Wehrle reference in view of the Moribayashi reference.

Claims 2, 6 and 27-30 are rejected as above, and further in view of the Oberle reference.

Claims 7, 20 and 21 are rejected over the Wehrle and Moribayashi references, and further in view of the Oshima reference.

Claims 8 and 22 are rejected under 35 USC 103 over the Wehrle and Moribayashi reference, and further in view of the Hamamura reference.

Claims 9 and 23 are rejected under 35 USC 103(a) over the Wehrle and Moribayashi reference, and further in view of the Montagu reference.

Claim 12 is rejected under 35 USC 103(a) over the Wehrle and Moribayashi reference, and further in view of the Huynh reference.

Claim 18 is rejected under 35 USC 103(a) over the Wehrle and Moribayashi reference, and further in view of the Suzuki reference.

Also, the claims are rejected under 35 USC 112.

In connection with the Examiner's rejection of the claims under 35 USC 112, applicant amended Claim 1 by removing the term "uninterrupted." It is believed that the Examiner's grounds for this rejection should be considered as no longer tenable and should be withdrawn.

In view of the Examiner's rejection of the claims over the art, applicant amended Claim 1, the broadest claim on file, so as to more clearly define the present invention and to distinguish it from the prior art. Also, Claim 32 has been added.

It is respectfully submitted that Claim 1, in addition to other features, now defines that the knurling has radial grooves and axially pointed raised areas which extend in the radial direction, the axially pointed raised areas have sharp edges with wedge-shaped points and are composed of a high-strength material, penetrating more easily into the contact faces that are softer.

These features are disclosed in the specification, in particular in the paragraph bridging pages 7 and 8, and on page 3 in lines 10-15, and also shown in Figure 3.

Turning now to the references and particularly to the Wehrle reference, it can be seen that the arrangement disclosed in this reference has an annular magnet (2) which is provided on its axial end faces with a structure having axial raised areas which extend radially. Such an end face of the annular magnet is pressed by means of a separate spring element (14) against the end face S1 of a commutator. The spring projections (7) shown in Figures 7 and 8 engage in corresponding depressions on the surface of the magnet. The spring projections (7) are however not formed with sharp edges having wedge-shaped points, but instead as can be seen in Figure 7 they are rounded (convexly) on their axial abutment surfaces. The spring projections (7) do not dig into the contact face of the magnet. Also, these spring projections do not form a form lock between the spring projections (7) and the clamping face S2 in the tangential or rotary direction, since the rounded spring projections of Figure 8 can simply slide from one depression (12) of the clamping face S2 in a peripheral direction into the next depression (12).

In contrast, in the present invention the permanent magnet (3) has axial contact faces (20), which cooperate with the corresponding axial clamping

faces (22) of a retaining element (4). The retaining element has a radial knurling (46) with axially pointed raised areas (48) which have sharp edges (52) with wedge-shaped points (54) and dig into the abutment face (contact face 20) of the annular magnet. The axially pointed raised areas (48) are composed of a high-strength material which easily digs into the softer contact faces of the magnet.

With such a construction a reliable form lock in the congenital direction is established, wherein the annular magnet simultaneously can move in the radial direction in the case of a thermal expansion, and due to the digging of raised areas (sharp edges) a radial guidance as well as a self-centering of the magnet is provided. The advantages of this construction are described in detail in the paragraph bridging pages 1 and 2 of the specification.

It is believed to be clear that this reference does not teach the new features of the present invention as now defined in amended Claim 1.

The patent to Moribayashi discloses a rotating machine in which the retaining element (22) has spring projections (24) shown in Figure 9. It has no knurling in a radial direction. Moreover, the clamping faces have no sharp edges or wedge-shaped points. As shown in Figure 8, the spring projections (24) flatly abut against the axial end face of the magnet (18). In other words, the reference clearly teaches a way from the new features of the present invention ,

in particular from the tips of a radially oriented knurling digging into the surface (18) of a magnet.

The construction shown in Figure 8 have no form lock relative to a tangential direction, but instead the spring element (24) is pressed axially against a flat surface of the magnet. Thereby, no raised areas with sharp edges extending radially dig into the surface, and this feature does not have any hint, suggestion, or motivation in this reference, to be capable of providing a radial guidance of the magnet during the thermal expansion and its self-centering.

This reference also does not teach the new features of the present invention.

The other references do not disclose these new features of the present invention as well, and therefore any additional discussion of them should be considered to be superfluous.

The Examiner rejected the claims as being obvious over the combination of the references. It is believed to be clear that none of the references teaches the new features of the present invention, and the references do not disclose any hint, suggestion or motivation for these features. In order to arrive at the applicant's invention from the references applied against the original

claims, it would not be sufficient just to use the constructions disclosed in the references, but the reference have to be fundamentally modified, and in particular by including into them the new features of the present invention which are now defined in amended Claim 1 and were first proposed by the applicant. However, it is known that in order to arrive at a claimed invention, by modifying the references the cited art must itself contain a suggestion for such a modification.

This principle has been consistently upheld by the U.S. Court of Customs and Patent Appeals which, for example, held in its decision In Re Randol and Redford (165 USPQ 586) that:

Prior patents are references only for what they clearly disclose or suggest, it is not a proper use of a patent as a reference to modify its structure to one which prior art references do not suggest.

Also, as explained hereinabove, the present invention provides for the highly advantageous results which cannot be accomplished by the constructions disclosed in the references. It is well known that in order to support a valid rejection the art must also suggest that it would accomplish applicant's results. This was stated by the Patent Office Board of Appeals, in the case Ex parte Tanaka, Marushma and Takahashi (174 UPSQ 38), as follows:

Claims are not rejected on the ground that it would be obvious to one of the ordinary skill in the art to rewire prior art devices in order to accomplish applicant's result, since there is no suggestion in prior art that such a result could be accomplished by so modifying prior art devices.

In view of the above presented remarks and amendments, it is believed that Claim 1 as amended should be considered as patentably distinguishing over the art and should be allowed.

New Claim 32 defines a rotor wherein the axially pointed raised areas (48, 52) dig in the contact faces (20) of the magnet or the surface coating of the magnets so as to form a form lock with regard to a tangential direction. The features of this claim are also not disclosed in the references. This claim should be considered as patentably distinguishing over the art not only because it depends on the allowable Claim 1, but also because it contains the patentable matter per se.

As for the other dependent claims, these claims depend on Claim 1, they share its allowable features, and they should be allowed as well.

Reconsideration and allowance of the present application is most respectfully requested.

Should the Examiner require or consider it advisable that the specification, claims and/or drawings be further amended or corrected in formal respects in order to place this case in condition for final allowance, then it is respectfully requested that such amendments or corrections be carried out by Examiner's Amendment, and the case be passed to issue. Alternatively, should the Examiner feel that a personal discussion might be helpful in advancing this case to allowance; he is invited to telephone the undersigned (at 631-549-4700).

Respectfully submitted,



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